

ON TRACK WITH BARIX

Support to Keep You On Track With a Healthful Lifestyle

B HEALTHY

B VITAMINS FOR OPTIMAL HEALTH

Weight loss surgery improves or eliminates many health conditions. Above and beyond that, an opportunity for an enhanced degree of wellness and vitality exists. Vitamin and mineral supplementation is essential to prevent nutrition deficiencies and to promote optimal health following weight loss surgery. Obtaining all of the vitamins and minerals from food alone is difficult before surgery and very unlikely after surgery with smaller portions. In addition, certain foods may be limited or avoided after surgery because of intolerance. Those having gastric bypass surgery also lack the benefit of the acidic churning environment of the larger stomach, the full length of small intestine for absorption, and a typical appetite for the first months following surgery—all increasing the need to supplement nutrients. Making healthful food choices, consistently taking the vitamin and mineral supplements as recommended, and completing lab tests at the recommended intervals will help to keep you full of energy and on the way to a healthful weight loss.

The B vitamins work together and have important roles in the breakdown of protein, carbohydrate and fat for energy and in nerve function. They are essential for multiple processes in the body. The deficiency of one B vitamin may be associated with a poor intake of several B vitamins.

Learn what they do and how to boost your Bs.

VITAMIN B 1 (THIAMINE)

Thiamine is needed for normal functioning of all body cells. It is involved in nerve function and the breakdown of carbohydrate, protein and fat for energy. Deficiencies can result in vague symptoms of fatigue, loss of appetite, weight loss, intestinal upsets, nausea, weakness, memory loss, emotional instability, reduced attention span, irritability, confusion and depression. Permanent damage to the nervous system can result if a severe deficiency is not corrected. The highest risk for deficiency with weight loss surgery appears to be associated with excessive vomiting that rarely occurs in the early postoperative period. Thiamine is found in a variety of foods including pork, peas, collard greens, oranges, dried beans and peas and wheat germ. The Daily Value of 1.5 mg (found in most multi vitamin and mineral supplements) should be an adequate supplemental level for the majority of gastric bypass and adjustable band patients.

VITAMIN B 2 (RIBOFLAVIN)

Riboflavin is needed for the release of energy from foods, normal growth, production of hormones, and the formation of red blood cells. Clinical deficiencies are rare except in alcoholism. Mild deficiencies may include soreness and burning of the



mouth with cracks in the corners, burning and itching of the eyes, and sensitivity to light. Small amounts of riboflavin are found in a variety of foods. Foods with the highest concentrations include milk products, liver and dark green vegetables. The Daily Value of 1.7 mg (found in most multi vitamin and mineral supplements) should be an adequate supplemental level for the majority of gastric bypass and adjustable band patients.

NIACIN

Niacin has a role in more than 50 body processes and has a primary role in the release of energy from carbohydrates. Interestingly, the body can convert tryptophan, an amino acid, into niacin. This makes niacin deficiencies rare. All cells are affected by a niacin deficiency. Symptoms may include weakness, loss of appetite, indigestion, skin eruptions and lethargy. If not treated, the deficiency can progress. The Daily Value of 2 mg (found in most multi vitamin and mineral supplements) should be an adequate supplemental level for the majority of gastric bypass and adjustable band patients.

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VITAMIN B 6 (PYRIDOXINE)

Pyridoxine has a primary role in most protein related compounds including hormones, hemoglobin, nerve chemicals and enzymes. Deficiency symptoms are numerous and vague. Symptoms can include depression, vomiting, dermatitis, anemia, inflammation of the nerves, nausea, lethargy, and oxalate kidney stones. The best dietary sources of pyridoxine are lean meats, wheat germ brewer's yeast, poultry, fish and dried beans and peas. Very large doses of pyridoxine can be toxic, causing nerve damage. The Daily Value of 2 mg (found in most multi vitamin and mineral supplements) should be an adequate supplemental level for the majority of gastric bypass and adjustable band patients.

VITAMIN B 12 (COBALAMIN)

Vitamin B 12 functions in the formation of the protective sheath around nerve cells; in the metabolism of carbohydrates, protein and fat; in the production of amino acids and fats; in the replication of genetic code within each cell and in the formation of neurotransmitters. Unlike most water-soluble vitamins, Vitamin B 12 is stored in the liver and other organs

of the body. Vitamin B 12 requires intrinsic factor, a substance in gastric juices, for absorption.

There is a significant risk of vitamin B 12 deficiency after weight loss surgery. Studies indicate that 37% of people develop a vitamin B 12 deficiency after gastric bypass surgery. In a pre-surgical stomach, gastric juices free vitamin B 12 from foods. It then binds with intrinsic factor in the stomach prior to moving through to the lower small intestine for absorption. This process is much less efficient after surgery, leading to a lower absorption rate for vitamin B 12. Additionally, there may be an increased need for vitamin B 12 during the rapid weight loss phase when vitamin B 12 is needed for the breakdown of stored fat. Adjustable band patients may also be at risk for a deficiency due to an increased need for the nutrient and a decreased intake of dietary sources.

Oral supplementation with vitamin B 12 is somewhat effective. However, because the vitamin B 12 must bind with intrinsic factor, in a less than optimal process, absorption is compromised after gastric bypass. Vitamin B 12 injections are an option; however they require a trip to the doctor on a regular basis. A cost efficient, effective

solution is a liquid or dissolvable tablet taken sublingually (under the tongue). Preventative sublingual supplementation of 250-500 mcg daily is acceptable—therapeutic doses may be higher. Vitamin B 12 levels are monitored in the routine gastric bypass and supplementation will be recommended by your physician if levels get close to or below the low end of the normal range. An untreated vitamin B 12 deficiency can lead to irreversible nerve damage.

FOLIC ACID

Barix Clinics routinely monitors folic acid levels in the post gastric bypass lab panel. It appears that the Daily Value of 400 mcg (the level of folic acid found in most multi vitamin and mineral supplements) is adequate to prevent a deficiency after weight loss surgery. Anyone desiring to become pregnant should keep a close eye on folic acid levels. Folic acid deficiencies are best known for increasing the risk of neural tube birth defects. Adequate folic acid levels also appear to have a protective role against colorectal cancer, but more recent studies indicate that larger folic acid intakes may actually accelerate carcinogenesis in existing cancers.

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CHOOSING a MULTI-VITAMIN and MINERAL SUPPLEMENT

- Use caution when choosing herbal supplements—they are not standardized for dose or regulated for safety.
- Avoid “weight loss formulas” that may include stimulants or ingredients that have not been evaluated for safety or effectiveness.
- Natural and synthetic vitamins are virtually identical.
- Look for the USP (United States Pharmacopoeia) mark on the bottle. The manufacturer pays for this testing. It means that the listed ingredients are indeed in the supplement and that the supplement will dissolve. It does not guarantee safety.
- % Daily Values means the same thing as % USRDA (US Recommended Daily Allowance). Labels use them interchangeably. This is the FDA's advice on how much of the vitamin or mineral to shoot for each day.
- Check the expiration date on the bottom of the bottle.
- Store brands are usually just as good as national brands.
- A multi-vitamin and mineral supplement should contain no more than 150 percent of the RDA for any nutrient.
- Manufacturers are responsible for setting their own safety standards—there are no government standards or checks for safe manufacturing.
- Supplements can be called “High Potency” if at least 2/3 of its nutrients have 100% or more of the Daily Value (DV).
- “Advanced,” “Complete,” or “Maximum” formulas can mean anything.

As researchers continue to learn which supplements are ideal for weight loss surgery patients and for health in general, minimize your risks for deficiencies by choosing healthful foods, taking a good quality multi vitamin and mineral supplement and other supplementation as recommended by your surgeon and nutritionist and follow up with lab work as ordered. Keep in mind that more isn't always better when it comes to vitamin and mineral supplementation. Vitamin and mineral supplementation must be a lifetime commitment after weight loss surgery—your nutritional needs don't change because you get tired of taking your supplements.

RECONSTRUCTIVE SURGERY

To receive a **FREE RECONSTRUCTIVE SURGERY** guide, call 800-282-0066 or send us an email at rc@barixclinics.com with your name and contact information.

Our reconstructive surgery program is currently performed at our centers in Michigan, Ohio, and Pennsylvania. Call us today for more information!

OTHERS CARE PLEASE SHARE

Please tell us about the lives that have changed because you shared your weight-loss story. Submit your story to <http://www.barixclinicsstore.com/id190.html>. What you have to say may be printed in this publication or on our website and can serve as inspiration to all.

CONSIDERING SURGERY

Research is finding nutritional deficiencies in pre-weight loss surgery patients in numbers higher than might be expected. Less than optimal food choices, diabetes and fat-soluble vitamins trapped in fat tissue (making them unavailable) are some possible explanations. In the weeks or months between consultation and surgery, much can be done to prepare for surgery and improve nutritional status. One of the easiest recommendations to comply with is a daily complete multi-vitamin and mineral supplement. This will help to correct any existing deficiencies.

Making moves to choose a healthier diet also has significant benefits. Incorporating six small, high protein meals and an abundance of fresh vegetable, whole fruits and low fat dairy products will provide vital nutrients, encourage pre-surgery weight loss and prepare you for a healthy eating pattern after surgery.

Getting into the routine of regular exercise will also improve pulmonary function, encourage weight loss and establish healthy activity patterns.

Use the time between consultation and surgery to get yourself into great shape. It is never too soon to begin the process of improving your health.

"One of the greatest experiences in life is achieving personal goals that others said would be, 'impossible to attain.' Be proud of your success and share your story with others."

~Robert Cheeke~

IT WORKED FOR ME

Submitted by Nancy B.

Prior to surgery I LOVED Applebee's Oriental salad but post surgery can't have it as dressing is loaded in sugar. Thanks to the new spray dressing by Wishbone I make my own now. I take salad greens, sugar peas, carrots, water chestnuts, grilled chicken and chow mein noodles and then use a few sprays of the Asian flavor and I'm all set.

IN THE NEWS

HAPPINESS GENE

Researchers who study happiness (what a job!) find that about 50% of happiness is due to inherited personality traits. Despite this 'set point' for happiness, the researchers believe that happiness can be pursued. Rick Foster and Greg Hicks, authors of *The 9 Choices of Happy People*, list an active desire and commitment to be happy as a choice that leads to happiness. Once you have made the decision to make happiness a priority in your life, you can then develop strategies that will move you in that direction. Many psychologists agree that strategies to achieve happiness include cultivating gratitude, fostering forgiveness, counteracting negative thoughts and feelings, remembering that money cannot buy happiness, building friendships, and engaging in meaningful activities.

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www.barixclinicsstore.com/newsletter_sign_up.html

REWARD YOURSELF

This month, you could earn a **\$25 GIFT CERTIFICATE** for your “It Worked For Me” tips or recipes! Just submit as many recipes and “It Worked For Me” tips as you like. The most original and creative will be awarded a \$25.00 gift certificate. Include your name and contact info with your entry—make sure your recipes follow Barix nutritional guidelines. Tips must be submitted by April 30, 2008. Please send comments, ideas, recipes and “It Worked For Me” tips to Deb Hart, RD, LD at dhart@foresthealth.com.

“We are what we repeatedly do. **Excellence**, then is not an act, but a habit.”
~Aristotle~

REQUEST

A FREE BROCHURE FOR YOU OR A FRIEND at 800-282-0066, or www.barixinfo.com



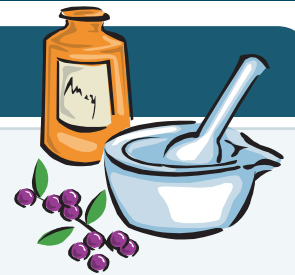
QUESTIONS

ABOUT FINANCING YOUR SURGERY?

Call a Barix Patient Service Representative at 800-282-0066



RECIPES



BREAKFAST MUFFIN

- 2 cups reduced fat Bisquick® baking mix
- 2 tbsp. white grape juice, frozen concentrate
- ½ cup skim milk
- 1 cup egg substitute, liquid
- 3 oz ham, extra lean, finely diced
- ¾ cup fat free cheddar cheese, shredded
- ½ cup onion, diced

Preheat oven to 400 degrees F. Place paper liners in muffin tins. Spray liners with cooking spray. Mix reduced fat Bisquick, white grape juice concentrate, skim milk and egg substitute. Stir well. Add ham, onion and fat free cheddar cheese. Bake 15-20 minutes. Makes 12 servings.

NUTRITION INFORMATION PER SERVING: 112 calories, 7 grams protein, 1 gram fat, 412 mg sodium.

HIGH PROTEIN FRUIT SPREAD

- 8 oz fat free cream cheese
- 3 scoops Any Whey Protein Supplement
- ½ cup 100% fruit spread (no added sugar)
- 2 packets Splenda
- 2 tsp. vanilla extract

Leave cream cheese at room temperature for 30 minutes. Mix all ingredients with a hand mixer until smooth. Use on toast, English muffin, pancakes or as a dip with fresh fruit. Makes 8 servings.

NUTRITION INFORMATION PER SERVING: 66 calories, 10 grams protein, 2 grams carbohydrate, 0 grams fat, 211 mg sodium.

DOCUMENTING YOUR WEIGHT LOSS JOURNEY

Weight loss surgery and the subsequent life changes are worthy of documenting. It is inspiring to reflect upon the body, emotional, social, relationship and work changes that occur throughout the journey. There are many ways to document. Some choose to keep a very private documentation; others put it out there for the world to see. Here are some ideas to inspire you to start to document your personal weight loss journey.

- Take lots of pictures: before surgery, in the hospital (with your favorite nurse or surgeon), at each month anniversary, enjoying new activities, sporting a new hair cut or stylish outfit
- Take measurements each month
- Blog online or make your own website

- Make a scrapbook
- Keep a photo album
- Make a video and post it on *YouTube*
- Use pictures and inspirational quotes to make a screen saver
- Include unique features in your documentation such as the rate of weight loss, feelings that the weight loss brings to the surface, fears, WOW moments, goals, people that have been amazing supports, your favorite protein drink, a funny experience, your reasons for having weight loss surgery

